

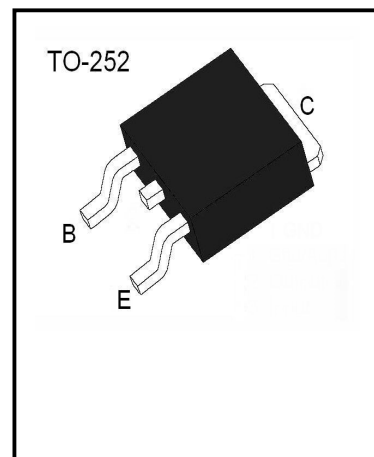
High Voltage Mode Application

High speed Switching

Suitable for Switching Regulator or Electronic Transformer For Halogen Lamps

Absolute Maximum Rating (Ta=25°C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV _{CBO}	700	V
Collector-Emitter Voltage	BV _{CEO}	400	V
Emitter-Base Voltage	BV _{EBO}	9	V
Collector Current	I _C	4	A
Collector Power Dissipation	P _C	50	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55~150	°C



Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base Breakdown Voltage	BV _{CBO}	I _C =500 μA, I _E =0	700			V
Collector-emitter breakdown voltage	BV _{CEO}	I _C = 5mA, I _B = 0	400			V
Emitter-base breakdown voltage	BV _{EBO}	I _E = 500μA, I _C = 0	9			V
Collector cut-off current	I _{CBO}	V _{CB} = 700V, I _E = 0			1	μA
Collector cut-off current	I _{CEO}	V _{CE} = 450V, I _B = 0			250	μA
*DC current gain	h _{FE}	V _{CE} = 5V, I _C = 10mA	8			
		V _{CE} = 5V, I _C = 0.5A	10		40	
		V _{CE} = 5V, I _C = 0.5A	8			
*Collector-emitter saturation voltage	V _{CE (sat)}	I _C = 1.0A, I _B = 0.2A			0.5	V
		I _C = 2.0A, I _B = 0.5A			0.7	
		I _C = 4.0A, I _B = 1.0A			1.1	
*Base -emitter saturation voltage	V _{BE (sat)}	I _C = 1A, I _B = 0.2A			1.1	V
		I _C = 2A, I _B = 0.4A			1.2	
Transition frequency	f _T	V _{CE} = 10V, I _B = 0.5A	4			MHz
Turn On Time	t _{ON}	V _{CC} = 150V, I _C = 2.5A I _{B1} = 0.5A, I _{B2} = -0.5A t _p = 30 ms			0.8	μs
Storage Time	t _{STG}				4.0	μs
Fall Time	t _F				0.9	μs

* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%

Typical Characteristics

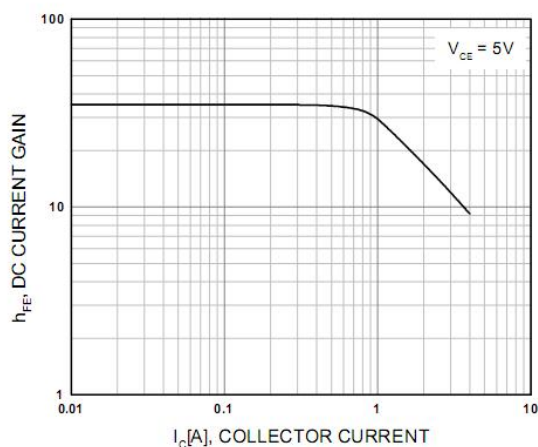


Figure 1. DC current Gain

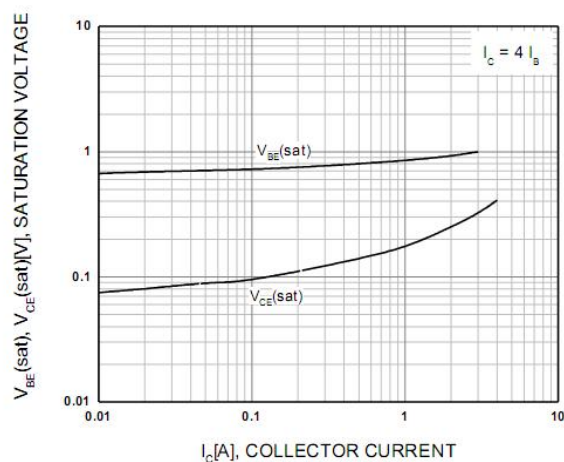


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

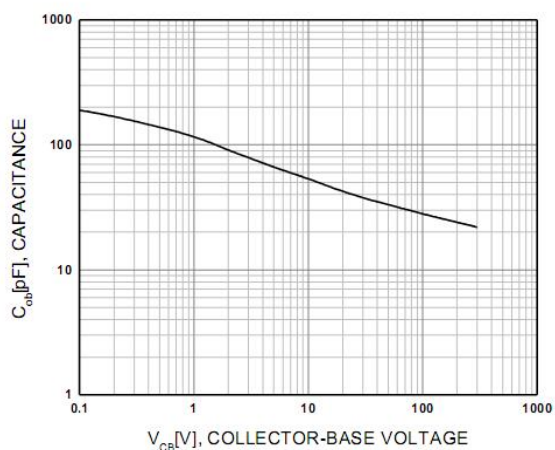


Figure 3. Collector Output Capacitance

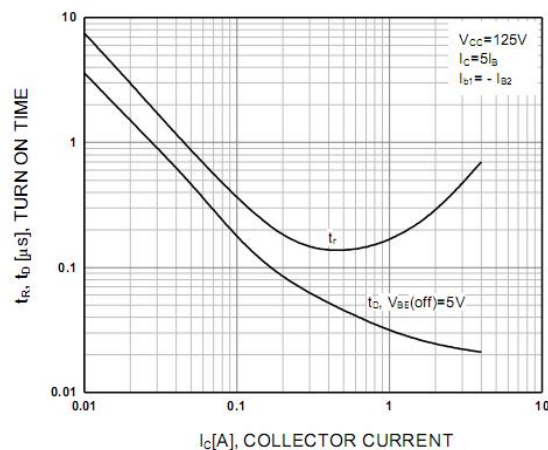


Figure 4. Turn On Time

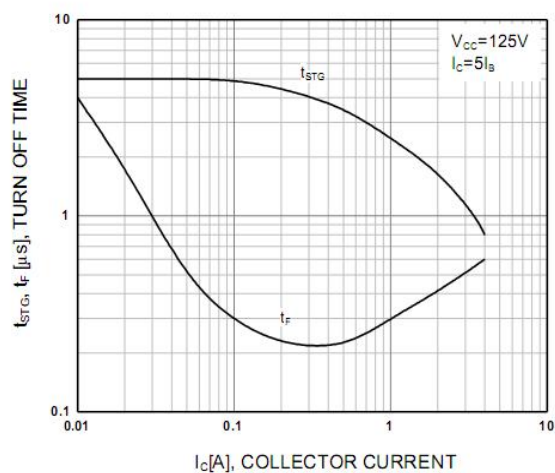


Figure 5. Turn Off Time

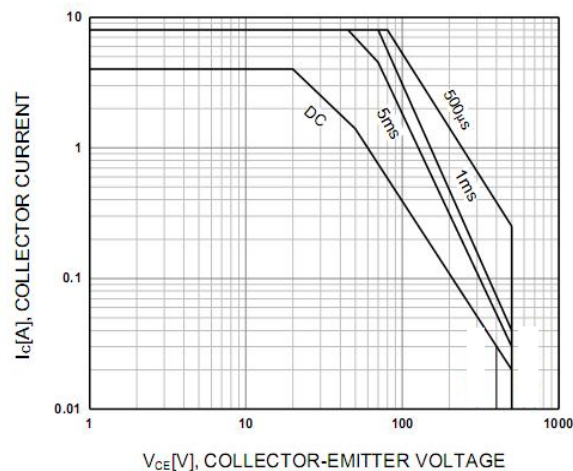
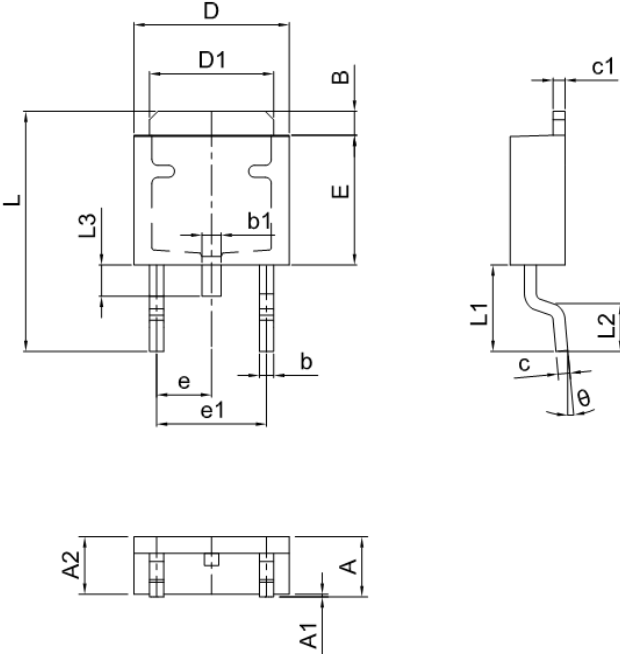


Figure 6. Safe Operating Area

Package Dimensions

	Symbol	Millimeter		Inches	
		Min.	Max.	Min.	Max.
	A	2.20	2.50	0.087	0.098
	A1	0.00	0.12	0.000	0.005
	A2	2.20	2.40	0.087	0.094
	B	1.20	1.60	0.047	0.063
	b	0.50	0.70	0.020	0.028
	b1	0.70	0.90	0.028	0.035
	c	0.40	0.60	0.016	0.024
	c1	0.40	0.60	0.016	0.024
	D	6.35	6.65	0.250	0.262
	D1	5.20	5.40	0.205	0.213
	E	5.40	5.70	0.213	0.224
	e	2.20	2.40	0.087	0.094
	e1	4.40	4.80	0.173	0.189
	L	9.60	10.20	0.378	0.402
	L1	2.70	3.10	0.106	0.122
	L2	1.40	1.80	0.055	0.071

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